International Conference on Science Engineering and Supply Chain Management (ICSESCM-19)

Chennai, India

22nd - 23rd November' 19

Institute For Engineering Research and Publication

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PREFACE

We cordially invite you to attend the ***International Conference on Science Engineering and Supply Chain Management (ICSESCM-19)*** which will be held at ***Abu Sarovar Portico, Chennai, Tamilnadu, India*** on ***November 22nd - 23rd , 2019***. The main objective of ***ICSESCM-19*** is to provide a platform for researchers, engineers, academicians as well as industrial professionals from all over the world to present their research results and development activities in relevant fields of Science Engineering and Supply Chain Management. This conference will provide opportunities for the delegates to exchange new ideas and experience face to face, to establish business or research relationship and to find global partners for future collaboration.

These proceedings collect the up-to-date, comprehensive and worldwide state-of-art knowledge on cutting edge development of academia as well as industries. All accepted papers were subjected to strict peer-reviewing by a panel of expert referees. The papers have been selected for these proceedings because of their quality and the relevance to the conference. We hope these proceedings will not only provide the readers a broad overview of the latest research results but also will provide the readers a valuable summary and reference in these fields.

The conference is supported by many universities, research institutes and colleges. Many professors played an important role in the successful holding of the conference, so we would like to take this opportunity to express our sincere gratitude and highest respects to them. They have worked very hard in reviewing papers and making valuable suggestions for the authors to improve their work. We also would like to express our gratitude to the external reviewers, for providing extra help in the review process, and to the authors for contributing their research result to the conference.

Since September 2019, the Organizing Committees have received more than 76 manuscript papers, and the papers cover all the aspects in Science Engineering and Supply Chain Management. Finally, after review, about 40 papers were included to the proceedings of ***ICSESCM-19***

We would like to extend our appreciation to all participants in the conference for their great contribution to the success of ***ICSESCM-19*** We would like to thank the keynote and individual speakers and all participating authors for their hard work and time. We also sincerely appreciate the work by the technical program committee and all reviewers, whose contributions made this conference possible. We would like to extend our thanks to all the referees for their constructive comments on all papers; especially, we would like to thank to organizing committee for their hard work.

ICSESCM-19

Acknowledgement

IFERP is hosting the ***International Conference on Science Engineering and Supply Chain Management (ICSESCM-19)*** this year in the month of November. The main objective of ICSESCM is to grant the amazing opportunity to learn about groundbreaking developments in modern industry, talk through difficult workplace scenarios with peers who experience the same pain points, and experience enormous growth and development as a professional. There will be no shortage of continuous networking opportunities and informational sessions. The sessions serve as an excellent opportunity to soak up information from widely respected experts. Connecting with fellow professionals and sharing the success stories of your firm is an excellent way to build relations and become known as a thought leader.

I express my gratitude to all my colleagues, staffs, professors, reviewers and members of organizing committee for their hearty and dedicated support to make this conference successful. I am also thankful to all our delegates for their pain staking effort to travel such a long distance to attend this conference.

Ankit Rath
Chief Scientific Officer
Institute for Engineering Research and Publication (IFERP)

International Conference on Science Engineering and Supply Chain Management (ICSESCM-19)

Keynote Speaker

Dr.K.Sujatha

Professor

Department of Electrical & Electronics Engineering

Dr. M.G.R Educational & Research Institute, Chennai.

Message

International Conference on Science Engineering and Supply Chain Management (ICSESCM-19) organized by Institute For Engineering Research and Publication (IFERP) will provide a chance for the researchers, delegates and students to exchange their ideas related to engineering and technology. It is an International forum which wide open to the domain experts and practitioners from both academia and industry.

This international event being organized by the Institute For Engineering Research and Publication (IFERP) not only provides scope for engineering experts but also paves way for the Engineers to enlighten their knowledge. This R&D association serves as a bridge to unite the researchers from academia and industry by conducting various events like Conferences, workshop, symposium, seminar etc., throughout the world to bridge the gap between the curriculum and the practical knowledge required to solve the real time problems.

ICSESCM - 19

International Conference on Science Engineering and Supply Chain Management

Chennai, India, November 22nd - 23rd November, 2019

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ICSESCM-19

International Conference on Science Engineering and Supply Chain Management

Chennai, India

22nd - 23rd November, 2019

ABSTRACTS

Organized by

Institute For Engineering Research and Publication (IFERP)

International Conference on Science Engineering and Supply Chain Management

22nd - 23rd November 2019 at Chennai, India

Data Analytics on Post graduate Students' performance data in competitive examinations using Artificial Neural Networks

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Abstract

There are huge amount of data available with regard to competitive examinations for admission into Post Graduate Courses in the state of Karnataka. Typically the entrance examination for admission to the MCA course is based on Multiple Choice Question (MCQ) formats. The current research work is aimed at examining the suitability of the MCQ based formats in deriving information on the measurement of aptitude of the students for the course. The research involves analyzing students' performance data in competitive examinations. A novel attempt in this work is to establish the linkages between past performance results and the question paper as an instrument to measure the aptitude of the students. In order to analyze the student's performance, the power of the artificial neural networks is being attempted.

Artificial neural networks(ANN) simulate the ability of the human brain to perceive underlying patterns in a given data set not perceptible using several other well known statistical data analysis techniques. ANN have a set of inputs and outputs, the outputs being calculated through many iterations of transformations carried through a set of middle layers ,called as hidden layers. The number of these hidden layers can vary depending on the problem that is being tackled. For the transformation between the inputs and the outputs, the hidden layers of ANN use many triggering functions. In the current work, the students' results, taken from the public domain website are used as the data set. These are analyzed by using ANN technique. The output from the analysis helps in the formation of clusters based on the marks obtained by the students in the competitive examination. In the next step the relationship between the marks obtained by the students and the type of questions is established. The MCQ based questions are graded using the standard benchmark as in the Bloom's taxonomy. The ANN model can also help in predicting the results of the students. The output from the ANN model is then fed into an RDBMS platform for establishing relationships. Here, research concepts from data mining tools, clustering and document comparison have been used. The CART algorithm is then used to identify the clusters and groups of students based upon their performance and the questions that they have attempted. The computations in this research use the R programming environment for analysis using ANN and CART. The research study yielded the results in the formation of students clusters –Further research yielded the information on the type of the questions and benchmarking assigned to the questions. It was also possible for building association of the students' cluster with the questions types attempted. The insights gained helped in obtaining suggestions for modification and improvement of the questions types, so as to develop better measures of aptitudes.

Keywords

Entrance Examination,MCQ,ANN,CART, Decision Support System

Study of Azimuth Angle and Elevation Angle Variations of IRNSS/NavIC Signals

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Abstract

The IRNSS satellite network covers a large area of the India with 7 satellites, 3 geostationary and 4 that are geosynchronous. IRNSS signals are transmitted in the L5 and S-Bands. The L5 band frequencies range from 1164.45-1188.45 MHz and the S band frequencies range of 2483.5-2500 MHz. NavIC is the IRNSS satellite constellation network that can be employed to a variety of applications. The paper shows the analysis of the azimuth and elevation angle with respect to carrier to noise ratio. This study will be stepping stone for the collection of data using reflectometry. The different graphs were obtained and analyzed. Satellite tool kit is also used for the analysis of the elevation and azimuth angle.

Keywords

IRNSS; Elevation angle; Azimuth angle; TOWC

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Experimental Investigations of Corn Husk Fibre Reinforced Polymer Composite

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Abstract

This work's objective is to utilise the dissipated corn husk from agricultural background, reinforce it in polymer matrix and study its tensile characters. The intention of this work is to reduce the problems produced by the agricultural residues rewardingly. The composite is prepared by drying the corn husk under the sunlight and treat it chemically to make it compatible with the polymer matrix. They are then chopped to reinforce it into the polymer matrix using hand layup process. The polymer composites are prepared according to ASTM standards. The prepared composites are cured and tested, based on the conclusion the favourable outcomes are chosen for optimum results.

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Personal Authentication Using Knuckle Geometry and Dorsal Knuckle vascular Pattern

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Abstract

With the increased use of biometrics for identity verification, there have been similar increases in the use of unimodal biometric system. The finger knuckle print recognition is one of the newest biometric techniques research today. In this paper, one of the reliable and robust personal identification approaches using finger knuckle print is presented. Many researchers are going on in face, finger print and iris recognition and which finds its usage in many applications. These biometric which find its usage in many applications are easily duplicated for fraudulent activities. But the finger knuckle print recognition is the unique pattern to identify the individuality at a high level of accuracy. This paper proposes new algorithms for finger knuckle print recognition using SIFT algorithm and this algorithm presents, extracting a new original constant features from images As the proposed method matches the different angles of finger knuckle print with the database, its reliability is very high when compared to other biometrics. The features of SIFT which are invariant to image scale and rotation, are shown to provide robust matching across a substantial range of fine distortion, change in 3D viewpoint, addition of noise, and change in illuminance. The features are highly distinctive, in the sense that a single feature could be correctly matched with high probability against a large database of features from many images.

Keywords

Unimodal, SIFT, finger knuckle print, biometric, recognition.

Smart Waste Management using Internet of Things

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Abstract

Solid waste management is one of the primary problems that India faces in recent times. It is noted that most of the solid waste across the roadside bins are overloaded because the waste is not collected in a periodic fasion. Hence here, we came up with a low cost, less power consuming waste management system using Internet of Things which will be applicable in areas that are not economically sound. This idea enables us to collect the waste trash as and when the can is full or when the trash inside is decomposed compared to daily collection. So that there will be proper waste management across the areas bringing forth proper hygiene in order to render a pleasurable surroundings.

Keywords

Solid waste management, Internet of Things, garbage, economically, decomposed, hygiene.

Interpretation of Flow Visualization in Generic Combustor through Design and Fabrication of a Traverse System

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Abstract

This research work deals with design, fabrication and assembly of a two axis traverse system to make various non-intrusive planar measurements as applicable to aero propulsion research in the stream wise and span wise direction. The Two axis Traverse system will help enable the investigators to address various types techniques and acquire detailed and comprehensive information about the flow field which may be a single plane flow field where the fuel-air mixing of the gas jets can be studied by acquiring the velocity field of the injected fuel at various stream-wise reactions using Mie scattering technique or alternatively study the liquid penetration and mixing characteristics by the use of appropriate lasers and image acquisition equipment. This traverse will also enable studies on drop size characteristics in a liquid fuel spray and fluorescence studies on the spray for fuel fraction measurements by mixing additional attachments to the image acquisition like an image doubler for SMD studies and image intensifier for fuel fraction measurements. The functionality of the traverse is verified and demonstrated by making planar Mie scattering measurements in subsonic cross flows for spray penetration.

Keywords:

Traverse system, non-intrusive planar measurement, Mie scattering technique, liquid fuel spray and fluorescence

Identification of Land Area Using Image Processing Technique

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Abstract

Segmentation and classification of high resolution satellite imagery is a challenging problem due to the fact that it is no longer meaningful to carry out this task on a pixel-by-pixel basis. The fine spatial resolution implies that each object is an aggregation of a number of pixels in close spatial proximity, and accurate classification requires that this aspect be easily considered. K-means clustering algorithm is a better method of classifying high resolution satellite imagery. k- means clustering or Lloyd's algorithm, is an iterative, data-partitioning algorithm that assigns n observations to exactly one of clusters defined by centroids, where k is chosen before the algorithm starts. The extracted regions are classified using a minimum distance decision rule. The procedure significantly reduces the mixed pixel problem suffered by most pixel based methods. In this work, we used K-means and fuzzy C means clustering algorithm to classify satellite imagery into specific objects within its boundaries and environmental planning purposes. The various pixels are divided into clusters. A centre point is found for all the centroids. The entire clusters are classified based on this centroid. In our project we are using k-means clustering algorithm and Fuzzy c means to separate the pixels of the satellite images and processing it with the help of matlab software and naming the clusters according to their colour configurations. Using this clustering method for satellite images we can name the places in the image based on colour. For example green colour indicates forest area, blue indicates water mass, brown indicates muddy area and more. Fuzzy C-means is independent of initial clusters and better clustering results are obtained. There are other types of clustering methods like partitioning method, hierarchical method, density-based clustering and model-based clustering.

Keywords

k-means algorithm, Fuzzy C-means algorithm.

Smart Irrigation System using Solar Power and Cost Effective Moisture Sensor

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Abstract

In the field of agriculture, use of proper method of irrigation is important because the main reason is the lack of rains & scarcity of land reservoir water. The continuous extraction of water from earth is reducing the water level due to which lot of land is coming slowly in the zones of unirrigated land. Another very important reason of this is due to unplanned use of water due to which a significant amount of water goes waste. For this purpose, we use this automatic plant irrigation system. The system derives power from solar energy through photo-voltaic cells. Hence, dependency on erratic commercial power is not required. The main objective of this project work is to make possible Irrigation Automatic using solar power and cost effective self built moisture sensor.

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Service Supply Chain-Lean and Green practices adopted by Indian Banks

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Hemalatha.R, Christ(Deemed to be University)

Abstract

Banking services are progressively rising their importance in the global economy. In the context of Indian banking, there is a paradigm shift from manual to the automated system. Supply chain information flows through digitalisation is very useful in managing stakeholders. This information flow model has increased customer inclusion, saves time and has increased manifold volume of transactions. Efficient green banking is the integration of physical processes with the digital infrastructure to create an effective distribution and settlement of cash transactions. Banking operations are looking for overall reduction of carbon footprints. Green banking is incorporating and promoting environmental-friendly practices to reduce carbon footprints by adopting lean practices.These Lean concepts have combined operational improvements, technology adaptation and changing habits in banking business. This research is attempting to investigate the effect of green technologies on Indian banking and its customer satisfaction.

Key words

Green banking, technology, green products, customer satisfaction.

Minimizing Fuel Emissions and Cargo Travel Time Using Green Logistics

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Abstract

Sustainable transportation has become a critical issue for conserving the environment (ozone depletion, acid rain, and smog). Mass cargo transporters are in urge to find solutions for decreasing emissions (sea and road) and to improve the cargo transit time, by implementing green logistics. This study develops a decision-making model, which provides smart results by multi-proportion principle (60/40, 70/30) from source to destination. Based on the data, the model estimates the emission quantity and the time required to reach destinations. The findings show that increasing the usage of ships for cargo transit services has a positive impact on the emission of an entire supply chain (i.e. CO2 emissions reduced to 25% of the original value).

Keyword:

Decision-Making Models, Fuel Emission Optimization, Green Logistics, Mass Cargo Transporters, Sustainability

 ISBN: 978-93-89107-58-6

Empirical Analysis on the Performance of Socially Responsible Stocks vs. General Stocks in India

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Abstract

India being the largest democracy on Earth and the fastest growing economy is still in the mushrooming stage of Responsible investing. Past studies attribute this state to the lack of awareness on such investments among investors and to the uncertainty on Socially Responsible Investing (SRI) performance and the financial returns the investment could generate. As a first step towards clearing the apprehensions with SRI this study has been undertaken.

The primary objective is to analyse the performance of Indian SRI stocks via the Sustainability indices of BSE. Past nine years (2010-2018) historical data of five indices from the Indian stock market is used. Three among them BSE 500, BSE SENSEX, NSE NIFTY are conventional indices and the other two BSE CARBONEX and BSE GREENEX are Sustainability indices. BSE 500 represents the market portfolio i.e., used as a benchmark for all other indices. While BSE Sensex and NSE Nifty represent the general stock portfolio, BSE Carbonex and BSE Greenex represent the Socially responsible investment portfolio. For the risk-free rate of return, yield of 364 days T-bills is used.

The analysis has been carried out in three sections. First, the performance of SRI stocks against the General stocks with their average monthly return. Second, risk and return measures namely Sharpe, Treynor, Jensen's alpha and Sortino have been employed to study risk associated return of the SRI stocks portfolio. Third, the performance of the SRI stocks during the 2016 Demonetisation period has been studied to ascertain the stability of the investment during an economic crisis.

The findings made from the study indicate that the Socially responsible stocks perform similar to the general stocks and do not display any significant variation from the performance of general stocks. The associated risk measured as systematic risk (β) in the study also appears consistent across indices. Even during the crisis period both SRI and conventional stocks behave in the same way.

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To Mitigate Dispersion Effects in Coherent Optical WDM System Using DSP

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Abstract

Dispersion and attenuation of light signal are main hindrance in WDM optical communication system. Dispersion is spreading of pulse (wavelengths) without losing its original shape. This may cause of overlapping of pulses at output of fiber. Attenuation of signal can be overcome by using optical amplifier and dispersion can be compensated by using dispersion compensation fiber, fiber Bragg grating and optical phase conjugation. The performance of system can be enhanced by implementation for efficient digital compensation techniques in Coherent WDM system. This paper is analysing the effect of linear impairments with existing techniques and proposed a digital mitigation technique for dispersion and PMD in optical coherent system while ignore the nonlinear effects of optical transmission channel. The result of proposed digital technique shows clear constellation diagram i.e. clear symbols and indicate the improvement in Q-factor at bit error rate (about 10-9) with advanced polarization multiplexed quadrature phase shift keying (PMQPSK) modulation at bit rate 100Gb/s. In addition, it also increases the achievable distance up to 200kms with DSP technique. This presented work shows improvement in both distance and quality of signal at minimum BER. It may consider the optimal solution to equalize the chromatic dispersion and PMD for coherent optical system.

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Implementation of VLSI Routing Techniques for Real Time Circuits

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Abstract

VLSI Routing is the very next stage of pin assignment and placement. Placement tends to work with the proper placing of inputs and outputs. At the time of placement, there are only logical connections between these pins. The physical connections are made by routing.The process of finding the geometric layouts of all the nets is called Routing. It is a very integral part of the VLSI chip design. The objective of routing is to minimize total wire length and number of vias and that each net meets its timing budget.

This paper shows the implementation of Lee's Maze routing algorithms using BFS and DFS which is used to find the shortest possible path in lesser time as compared to Lee's Algorithm.BFS is used to compute the shortest distance between every position and the start one. DFS is used to traverse all shortest paths in the course of backtracking from the end position to the start one. This basic algorithm has improved both speed and memory requirements. The speed is approx. 50 times more than the speed of Lee's algorithm This algorithm is converted to a Hardware Description Language i.e. Verilog and the code is simulated for different constraints. The above model is synthesized to obtain different parameters such as area, timing, power etc. for the total system designed. These results are then compared for different families of FPGA's.

It will consist of enhancement techniques of the routing algorithm which can help to produce the proper output for real time scenario. We are going to create an IP core for a new algorithm. For the above implementation, Cadence tool and MATLAB (SIMULINK) is used.

The purpose of this algorithm is to find the shortest path for any real time circuit without actually calculating it.This algorithm will perform the required operations with the help of some inputs. This will lead to reduction in time and memory

Performance Analysis of fingerprint Privacy Protection Using Sparsh Method

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Abstract

Finger impression security will be exceptionally imperative and only advanced planet. Currently an day's All that is transforming under advanced time Also our paper finger impression may be likewise changed under advanced biometric finger impression. In this one task we enhances advanced finger impression security by utilizing Different systems for example, sparsh representational. By and large we scramble two diverse fingerprints and make new What's more we might once more reproduce same first fingerprints with sparsh method. Previously, sparsh system we captures internal structure of finger impression utilizing gabor works.

Keywords:

Localization; Combination, fingerprint, minutiae, privacy, protection, sparse representation, Gabor transform function.

Performance Analysis of fingerprint Privacy Protection Using Sparsh Method

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Abstract

There are many techniques which are used for navigating the visually challenged people, navigation in real time traffic is the main problem. Objective of the project is to provide a solution with the aid of wireless sensor networks (WSNs). ZigBee system is used for indicating the presence of blind person in the bus station. Voice module and APR9600 audio playback systems are used to update and inform the blind person about the bus arriving and reaching destinations and to guide him as to what he has to do next. Microcontroller analysis the information provided and generates the corresponding bus number. ZigBee transceiver sends the bus number and announced in the microphone attached with the system. The system is connected with GPS which indicates the destination given. Audio output is generated by the voice synthesizer. The expected outcome of the project is to obtain an easy navigation system for people with visually impaired."

Key Words:

APR9600, ARM7, GPS, Voice module, ZigBee.

Implementation of Two level Key Exchange Mechanism based on Elliptic Curve Cryptography

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Abstract

The enhancement of communications over the networks for various purposes like IoT, space, military, telecommunication, commercial and consumer electronics encounters numerous challenges concerning the privacy and security paves an ideal and demanding way to design effective public key mechanism, which is to use Elliptic Curve Cryptography(ECC) with indulging more intricate mathematics in the calculation of public-key to formulate the key exchange, digital signature and encryption schemes. This paper proposes an unhackneyed public key cryptosystem that gives all the security imperatives like confidentiality, integrity, authenticity and non-repudiation of the data utilizing the Elliptic Curves. Consequently, the investigations on the proposed work were depicted in terms of security, communication and computational overhead.

Keywords

ECC, Elliptic curve Discrete Logarithm Problem, Elliptic Curve Diffie-Hellman key exchange, Public key exchange.

Distributed Stream Processing of Sales Data Using Opensource Tools

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Abstract

Enterprises have the need to compensate their salesmen with incentives in order to boost their sales. Large scale enterprises have a number of salesmen working at all times and this involves crediting of sales at a big data level. Crediting a certain sale to a set of people involved would require a processing system in place but when the system is in a batched model these credits will not be observed until the data is processed, wherein sometimes the batch duration could be for weeks. The need for a stream processing model to credit large scale sales data is of paramount importance for optimal performance by salesmen. This paper discusses about a stream processing model that uses Apache Kafka as the data flow pipeline using publisher/subscriber mechanism and distribution of processing of data using an Apache Storm Topology.

Keywords

Kafka, Stream Processing, Zookeeper, Storm

A Review on Watermarking for Tele-radiology

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Abstract

The advances in the field of telemedicine opens a new era in the medical field. The need for diagnostic and medical image interpretation services is growing rapidly all over the world. Tele-radiology is a branch of telemedicine in which telecommunication systems are used to transmit radiological images from one location to another. But it demands development of security schemes for medical data. There are eminent techniques developed for the security of medical images. This work makes a detailed study on different watermarking based techniques available for the security and authentication of medical images.

Index Terms

Watermarking, Teleradioloy

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Performance Comparison of Data Science Algorithms for Finding Association Rules

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Abstract

One of the foremost difficult areas of knowledge science is a way to effectively realize the frequent itemsets and association rules among the itemsets from large data sets. Many algorithms are there for locating a frequent pattern from large knowledge sets. Apriori algorithm is that the most traditional algorithm for mining association rule and finding frequent patterns from immense knowledge sets. In Apriori algorithm, massive numbers of candidate itemsets are generated, increase in records within the info leads to too several input/output outlay and it leads to multiple scanning of database. As a result execution time is hyperbolic. During this Paper, in conjunction with Apriori algorithm, Eclat algorithm additionally used for distinctive and projected the frequent itemsets and association rules among the info sets from massive info in a good manner. Eclat algorithm uses vertical info format. There's no compelled to scan the info to seek out the support count. Execution time to seek out the frequent itemsets and association rules between the info things is attenuated that the performance of the algorithm is hyperbolic. Performance of Apriori and Eclat algorithms are evaluated victimization execution time.

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Malayalam Phoneme Recognition Using Hidden Markov Model

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Abstract

Automatic Speech Recognition (ASR) is a process in which speech signal is converted into a sequence of words, other linguistic units by making use of an algorithm which is implemented as a computer program. The major objective with which ASR works is the development of the techniques and a system that enables the computers to recognize speech as input. Most precisely speech recognition means phoneme recognition. Good phonetic decoding leads to good word decoding, and the ability to recognize the phones accurately will undoubtedly provide the basis for an accurate word recognizer. In this work, a detailed study about Phoneme recognition using Hidden Markov Model (HMM) is done. Mel Frequency Cepstral Coefficient (MFCC) technique is used for feature extraction. Resulting feature vectors are clustered around some centroid location using vector quantization technique. K-means algorithm is used in vector quantization to classify a given dataset into clusters. These centroids act as an observation sequences for HMM.

Keywords

Phoneme recognition, Mel Frequency Cepstral Coefficient(MFCC), Vector quantization, K-means algorithm, Hidden Markov Model(HMM).

The Question Of Sustainability: How Green Supply Chain Management Influences Organisational Outcomes?

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Abstract

Today sustainability is the biggest concern for the entire world, and it is one of the foremost objectives of the United Nations sustainability goals. In the context of businesses, supply chain management is the most critical function which decides the company's performance. However, it is necessary to understand the organizational influence of green supply chain management (GSCM). This paper reviews the literature to explore the crucial factors of GSCM and furthermore analyses their influence on the organizational outcomes in Indian organizations. In order to understand the in-depth details, the authors have adopted a mixed research methodology to collect qualitative and quantitative data. The data from the manufacturing companies (automobile, food, pharmaceutical, textile, and electrical) was collected using the survey questionnaire and interview method from 75 companies using stratified sampling. The factor analysis was used to understand the influence of GSCM on organizational outcomes. The study also discussed that Indian organizations have a higher awareness about the environmental responsibility of the businesses due to government regulations, competitive situation, and globalization. However, they have practical barriers to adopting these practices. The findings of the study highlight the relationships of factors of GSCM and organizational outcomes. Finally, the conclusion of the study also deliberates that the sustainability of the businesses depends on the sustainability of their supply chains.

Keywords:

Sustainability in Businesses, Green Practices, Green Supply Chain Management, Organisational Outcome, Strategic Impact, Manufacturing companies in India

Detection of Traffic Rules Violation Using RFID

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Abstract

In today's world many lives are lost due to violation of rules especially during traffic signals. It is increasing day by day and government is taking several steps to control it. In this paper we are presenting a smart way which reduces the violation of traffic rules by detection the automatically deducing the fine from their bank accounts. In order to achieve this, we are here using Radio Frequency Identification (RFID) technology for identification of vehicles which violates the rules on road during transportation. This is mainly to concentrate on the violation of traffic signal. In the existing system the tracking of vehicles involves image processing techniques which will not be efficient under all the circumstances. For this reason, we are using RFID since each module has its own identification in the form of radio frequency. In general, there are two types of RFID module. They are active tag and passive tag.

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A Comprehensive Study of Lead Generation and Physicians Perception towards Acceptance of New Medical Devices in Pune Region

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Abstract

Oral health is not separate from general health, but maintaining oral health is definitely difficult. Medical device like Dental Flossers should have the same quality, safety, and efficacy as their counterpart gives the effectiveness of original brand medicines used to cure Dental problems. Dental Flossers also have to provide the same therapeutic outcomes but at a much cheaper cost, so are promoted in many countries to contain pharmaceutical expenditure and sustain the health care system. Thus, the perspective of patients and medicine consumers as end users of these medicines is an important factor to enhance the use and utilization of such medical devices. The objective of this paper is to review consumers' knowledge, perceptions, acceptance, and views of dental flossers in the current literature. Methods: An extensive literature search was performed in several databases, namely Scopus, PubMed, ISI Web of Knowledge, Proquest, and the Wiley online library, to identify relevant studies published in the English literature for the period 2010-2019. Results: A large body of literature has reported misconceptions and negative perceptions about generic medicines on the part of patients and medicine consumers. Further, in areas, there is still a considerable proportion of consumers/physicians who lack adequate knowledge or have insufficient information about utilization of such dental flossers. Thus, there is a need for educational interventions and activities to educate physicians about such medical devices. It is also evident in the literature that health care professionals (pharmacists) play a key role in the promotion of such medical devices and in patients' acceptance of them. Hence, health care professionals need to play a more active role by educating patients and recommending such medical aids to their patients.

Keywords

Flossers, Dental Health, Lead Generation, General Health

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Exploration of Structural and Photo Luminescence Properties of Lead Boro-Tellurite Glasses Doped with Eu^{3+} Ions for Photonic Applications

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Abstract

The lead boro tellurite with europium oxide glass samples having chemical compositions as B_2O_3-TeO_2-PbO-Eu_2O_3 were synthesized with the aid of conventional melt quenching course. Density and molar volume with respect to raising Eu_2O_3 concentration for obtained glasses were determined by using suitable formulae. The structural and luminescence properties of the prepared glass systems were characterized with the aid of X-ray diffraction (XRD) spectrometer, Fourier Transform Infrared Spectroscopy and spectrofluorometer (PL) respectively. Non crystalline nature of the glass was confirmed by XRD and the surface morphology by Scanning Electron Microscope (SEM) technique. FTIR measurements specifies the bound structure of the obtained glass system depends on BO_3 and BO_4 entities insertion in different structural groups and also by interlinked TeO_3 and TeO_4 groups. Five luminescence bands were observed at different wavelengths when excited by 394 nm source. The most intensive emission peak is positioned at 612 nm due to $^5D_0 \rightarrow {}^7F_2$ transition of Eu^{3+} ion (red emission). From the ready glasses, the data acquired reveals that, these glasses are promising materials for the development of solid state lasers.

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Mitigation of Frequency Variation through Voltage Control in Islanded Microgrid

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Abstract

Islanded microgrids have proved to be a reliable and better solution to provide energy for remote people. However microgrid should meet certain adequacy standards, which necessitates the system frequency and voltage within acceptable limits. This paper presents a voltage-based controller to control the frequency in an isolated microgrid through voltage regulation. The simulation studies of the controller are carried out in MATLAB. The frequency of the microgrid can easily vary from the nominal operating conditions. Thus there are sufficient frequency control reserves to control the frequency in the islanded microgrid but they have several drawbacks such as making the system unstable, need of additional communication infrastructure, high operating and maintenance cost. Thus the proposed Voltage based Frequency Controller (VFC) eliminates all these drawbacks and controls the frequency. The controller only demands a local feedback signal, so that the need for extra communication infrastructure is eliminated.

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Performance Analysis of Web Based Systems

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Abstract

The increasing demands for fast interactive response time makes que-ry performance one of the central problems of Web Based Systems. A sophisti-cated design is necessary to ensure high performance of such systems. Software Performance Engineering (SPE)", is an approach that builds and solves quanti-tative performance models to assess the performance of the system early in the software development life-cycle. The most common and popular approach for solving the performance models developed is to use Simulation. Simulation is a powerful tool for modeling and analysis of complex distributed systems where obtaining a closed-form analytical solution is extremely difficult. Simulation modeling is used extensively in industry for considering alternative system ar-chitectures.

If the performance of a Web Based System is determined to be unacceptable at the time of "acceptance testing", it can result in very expensive redesign, de-layed delivery or, in the worst case, complete non-use of the system. Accord-ingly, we developed a simulation tool, Web Based Performance Analysis Tool (WBPAT), to support Software Performance Engineering concept of estimating and analyzing the performance in the early design phases of Web System de-velopment.

Keywords:

Software Performance Engineering, Web Based Systems, Perfor-mance, Materialized Views, Indexing.

Comparative Evaluation of SMMD Values of Popular Social Media Sites: PGF-A High SMMD Case

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Abstract

In recent years, various social media applications have been using content in different multimedia forms. For the distribution of content as well as social interaction on internet and social media, the multimedia content is extensively used, called as social multimedia. A major trend in the current studies on social multimedia is using the social media sites as a source of huge amount of data for solving various problems in computer science applications. The wisdom of social multimedia lies in the usage of these multimedia elements. A few social media websites along with PGF site are considered here for evaluation of their social multimedia degree (SMMD). PGF is a Peoples' Governance Forum established in 2017 without any iota of personal benefit and with a good cause of shouldering the national responsibility of disseminating the national integration among the students and provide basic awareness of how to use internet positively. This paper presents an evaluation perspective of social multimedia degree (SMMD) in the form of table for "Social Multimedia" applications. The PGF is observed to have high SMMD.

Keywords:

Web Intelligence, Social Media, Multimedia, Social Multimedia, SMMD (Social Multimedia degree), PGF (Peoples Governance Forum), FCSGoT (Fake, Cheating and Sedition Government of Telangana)

Comparison of performance analysis of electronic ballasts with flyback converter and buck-boost converter in its PFC stage for Fluorescent lamp applications

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Abstract

This paper presents fly back and buck-boost converter built electronic ballast for fluorescent lamp. It is used for power factor improvement in intermittent mode at high frequency DC-AC inverter. The examination, plan, demonstrating and imitation of high power factor electronic ballast for a lamp are accomplished by continuous dc voltage. The resonant filter is carried to regulate the square waveform provided by the inverter weakening the higher order harmonics, thus reducing the total harmonic distortion. The power quality keys are estimated of ac mains current of total harmonic distortion and crest factor to validate its suitable performance. The Fly back and Buck-Boost based electronic ballasts were simulated using MATLAB Simulink and results were compared.

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Cube Roots

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Abstract

Finding the cube root of large numbers was known to the Indian mathematician “Aryabatta”.This method is explained in “Ganithapada” the mathematical section of the “Aryabatiya” , in Ganithapada explained tha pattern of prime factorization method . A cube number is obtained when a number is multipiled by itself for three times . Therefore finding the number whose cube is known is called finding the cube root. It is the inverse operation of cubing.

For a large numbers prime factors method is lengthy and difficult. So to overcome this problem. I invented division method on 07-10-2014

Perfect cubic number :

I proved that if a number is in the form of (n^2k+1)(n^k+2) is a perfect cubic number and conversely all perfect cubic numbers are in the form of (n^2k+1)(n^k+2) where k is 0,1,2,3,…….all whole numbers where as n is all natural numbers.

Keywords:

Cube, cube root, perfect cube root, prime factor.

Performance Analysis of FBMC System for Next Generation of Wireless Network

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Abstract

Filterbank Multi Carrier (FBMC) modulation is one of the design technique proposed has attracted considerable interest in case of 5G. Reducing subcarrier leakage is a prime issue for high data rate with less subcarrier space. FBMC provides small intermediate leakage comparing to that of orthogonal frequency division multiplexing (OFDM) to enable high data rate communication with less subcarrier space. The prototype filter and the filterbank design is one of the important problems under FBMC. This article proposes a new prototype filter design and filterbank design for the FBMC system by combination of weighted Hermite Polynomials based prototype and cosine modulation. The performance in terms of bit-error-rate (BER) of the proposed system is analyzed on AWGN, Rayleigh and Rician fading channel. The BER result proves that the proposed filter design achieves better performance comparing to that of the earlier techniques.

Key words:

Filter, Filterbank, FBMC, Multicarrier modulation, BER.

A Pilot Study: Successful Conflict Management Strategies in Digital Era

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Abstract

Now-a-days we are all in digital era were data plays a vital role. Industries are growing rapidlywere there so many technical skill set individuals are working as a team to increase the productivity of an organization. So the growth of the organization highly depends on individuals who are acting as an employee there. There are so many issues in the organization out which conflict management is the one were individuals or groups interests, goals and values are incompatibles which leads to block or thwart to achieve the objectives. This paper focuses on different conflict management strategies by which organization can have a best systematic approach for the issues.

Keyword

Conflict Mangement, Block, Thwart.

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Performance Enhancement of Induction Motor using Novel Pulse Width Modulation Scheme

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Abstract

The conventional resources are being replaced by renewable energy resources. The use of such renewable energy is not being reliable due to the variations in the output. The power quality problems can be mitigated by getting Multilevel Inverter (MLI) output. One of the factors for power quality improvement is the minimization of Total Harmonic Distortion (THD). A new carrier modulation technique, Linear Feedback Shift Register Carrier Modulation Scheme (LFSRCMS) for the multilevel inverter is proposed in this paper. In general, the conventional method is a single triangular carrier is used to produce the fixed frequency Pulse Width Modulated (PWM) signal and cause discrete frequency harmonics, Electro-magnetic interference, and audible switching noise. The proposed LFSR carrier scheme is produced through the random selection of two triangular signals that are of the same frequency but in the opposite phase. The random selection of the triangular carrier selection is carried out in a random pattern and is decided by the Binary Sequence. The BS bits are generated using shift registers and EXCLUSIVE OR gates. Multiplexers are used as random selectors to produce the frequency carrier waveform. The produced random carrier is modulated using any modulation technique to produce PWM signals for switching devices. The modulated signals are used for the H-bridge multilevel inverter. The PWM pulses for each HBML inverter switches can be obtained by comparing the sinusoidal reference signal with the phase disposition arrangement of eight random carriers to obtain nine-level output voltage. The multilevel inverter with LFSR PWM drives a 5HP Induction motor with reduced THD compared to the conventional method.

Keywords:

Linear Feedback Shift Register (LFSR); Multilevel Inverter; Pulse Width Modulation

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Smart Project Handler: Key to the Success of All Projects

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Abstract

Project Management System will look after the time and investment which will involve during the development of new projects and ongoing projects. It will look for various phases in the project which are involved under the entire development work such as analysis, system design, coding, testing and maintenance work etc. Time and money both are important factor for any organization in exist in the market and for it, they have to keep catchy eye on every bit of their investment. This system will keep track of invested time on particular phase and generate reports to make future analysis and take appropriate action to settle down the problem. We will be using Amazon Web Services (A.W.S.) and connecting it with the cloud so that anyone sitting at any corner of the world using this application can access it with an excellent internet connectivity. This application will do timely analysis of the projects which are stored in the application's database according to the specifications entered by the user. This system will also allow discussion forums like: freshers with faculties, freshers with seniors, amongst freshers only which will be very helpful for them to resolve their issues ,errors ,etc. and also guide them intelligently. This system will run dynamically i.e. basically it will work as a blog so that everyone who are signed in with this application can view comments and also give reply if they have a bit idea about it.

Agile Project Methodology is been used in this application, so that at every level team does its work and then combine to meet the expected output. The term for iteration used in one specific and popular Agile development method known as Scrum .Scrum is one of the agile methodologies designed to guide teams in the iterative and incremental manner. Often referred to as "an agile project management framework" its focus is on the use of an empirical process that allows teams to respond rapidly, efficiently, and effectively to change. Scrum is a framework that helps teams work together. Often thought of as an agile project management framework, Scrum describes a set of meetings, tools, and roles that work in concert to help teams structure and manage their work.

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Opportunities and challenges in building smart cities in India

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Abstract

India has seen massive growth in its urban population in the recent decades. Government and policy makers are facing challenges such as increase in urban population from rural areas and huge gaps in infrastructure. Smart city would be a city with facilities like smart people, smart technology, smart energy, smart transportation, smart IT and communication and above all smart governance. This paper is an attempt to focus on the key issues and the challenges to develop new cities or improve the infrastructure facilities in our existing cities which are over populated and not properly managed. Further, this paper also focuses on the challenges in financing smart city projects in India. Government of India has recently made the Smart Cities Mission under which 100 smart cities would be made. Several initiatives are being led by the Government of India to convert 100 Cities into Smart Cities. The possible choices for smart city financing could be PPP, Debt financing, FDI and Viability gap funding. The government could use PPP Route and could also encourage FDI for effective implementation of Smart Cities Project in India.

Keywords

Smart City, Infrastructure Financing, FDI, PPP

Good Hr Benchmarking Practices by the Level of Short -Term Debt: A Study in the Context of High Growth Companies

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Abstract

There is a high level of conflict among the stake holders in a high growth firm. The shareholders will try to pass the risk to the creditors whereas the creditors will not allow the risk beyond a certain limit. But the shareholders will be averse to issue equity as the source of financing or will resort to a higher level of long-term debt than required for the firm in the context of a surplus cash flow. Also, the other stake holders like employees and the managers may like to use the cash flow to increase their compensation which may affect the future investment prospects. So, in this context this may lead to the increase in the conflicts within the organisation and thereby the agency costs. This is more significant in the case of the high growth firms where the cash flow is positive and surplus is required for further growth. this conflict can be reduced by two methods, consciously keeping low level of long-term debt that is maintaining a higher level of Short-Term Debt and introduction of strict covenants for the firm. So, the good HR practices are determined by their capability to maintain low level of long-term debt and the enforcement of strict covenants to avoid the situations that will lead to the transfer of risks to the creditors. So, the paper tries to explore the capability of the management to enforce these two aspects and introduces 2 new methods for benchmarking the efficiency of the HR practices inside a firm. Also, it will be a new tool in the conflict reduction of the firm and will increase the value as well as the satisfaction of the employees of a firm. The paper also reveals the importance of Short-Term Debt in determining the Agency Costs of a firm.

Keywords:

Debt Management, Conflict Reduction, Bench Marking, Efficiency

Analysis of the Capital Structure in the Context of Bankruptcy Law Practices in India

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Abstract

The Insolvency and the Bankruptcy Code 2016 lays down new methods for the liquidation of the firm. It intends to decrease the bankruptcy costs. But it is not effective to prevent the build-up of future bad debts. Also, it is combining the aspect of the Debtor oriented procedures as well as the Creditor oriented procedures. The Article 29 A ensures the exclusion of the participation of the persons with criminal and dubious background in the resolution proceedings. This may also help to attract more foreign capital and may decrease the cost of the capital. It will also help firms to be more flexible in raising debts for their investment options. But this weakens the going concern concept of the firms as it does not offer an existence after bankruptcy. The bankruptcy laws in USA are more extensive and suitable to reduce the direct costs related to the bankruptcy. There is no significant difference in the Debt to Equity ratios of the bankrupt companies in India and USA So it cannot be considered as the indicator of bankruptcy.

Key words

Bankruptcy, Leverage Ratios, Direct Costs, Going Concern

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Challenges and Issues Involved In Adopting Lean and BIM in Construction

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Abstract

Lean Construction techniques have been introduced as an alternative way for conventional construction process in 1990's.. It is described as a process of eliminating waste, increasing worth and value, and meeting or extraordinary client necessities and requirements. Waste reduction and customer value satisfaction are important factors to be considered in implementing construction projects. Building Information Modeling (BIM) is an intelligent model based process. BIM implementation seems to more advantageous in construction industry, for instance, it makes use of visualization technique of a product to facilitate architecture, engineering and construction professionals to effectively plan, design and manage infrastructure. Review of literature is administered and a survey is conducted to identify major issues involved in adopting Lean and BIM in construction sector. The present study depends mostly on the survey questionnaires from building professionals. Totally forty construction companies were selected for the questionnaire survey. The results obtained were analyzed in Statistical Package for Social Science (SPSS). The outcome of the study indicates that Lean and BIM implementation is necessary for allocation of resources, quality improvement and it enhances the sustainability of building and also it signifies that there is a shortage in lack of awareness, lack of framework and professionals.

Key words

Lean Construction, Building Information Modeling, Construction Project Management, Relative Important Index (RII)

Automatic Robotic Crop Disease Detection and Pesticide Dispenser using Machine Learning

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Abstract

Agriculture diseases are the main factors in reducing the yield. To enhance the productivity, it is needed that the crops are supplied with required nutrients in correct quantities, sufficient sunlight and other environmental conditions. The identification of disease symptoms at early stages of crop growth could reduce the loss. The Identification using the conventional naked eye method is a laborious task and is not reliable, and the usage of Automated Pre-Trained machines would drastically improve the efficiency. This paper deals development of such automatic detection of plant disease by training a convolutional neural network model to classify the leaves of Pepper Bell plant into healthy and unhealthy in real time. A line follower robot is designed to travel across the farm for collecting real time image and apply machine learning algorithm of convolutional neural network to classify the leaves into healthy and unhealthy in real time. The line follower robot also equipped with a spray system to spray pesticide on affected areas. Deep Learning algorithms are applied on the dataset containing 2475 sample images (both healthy and unhealthy) of Pepper Bell leaves. The proposed mechanism archives accuracy 93.5% to classify the leaves.

Key words

CNN, Deep learning, Pepper Bell

Voltage quality issues in power system with non-linear loads

Vijaya Margaret

Abstract

This paper focuses on the different types of voltage quality issues in the power system with industrial loads. Most of the industrial loads are motors which is basically a three phase induction machine. Due to the presence of large number of nonlinear components and loads in the power system network these machines are generally subjected to non-sinusoidal operating conditions. This affects the overall operation of induction machines and raises the importance of protection devices to overcome these issues. A MATLAB simulink model is developed to understand the various power quality issues existing in the power system with the induction motor as an industrial load. The result shows the importance of selection of induction motor rating which helps in reduction of power quality issues and discusses role of the mitigation devices.

Key words

Power Quality, Voltage sag, Voltage swell, MATLAB/simulink.

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Comprehensive Analysis of Oil Extraction from Various Seed - a Near Fue

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Abstract

The present world population is very difficult to maintain the consuming energy. It is very serious problem to face for coming years. It is mandatory and major responsibility to care about energy generation from various biomass wastes. The renewable energy is the very big source to get bio fuel from various seed. Among the bio-fuel sources, the coconut shell, citrullus seed, gulmohar seed have an enormous amount of oil is available. There are 32% of area is covered by gulmohar trees and 21% of area is covered by citrullus seed. The south zone of India have major area of coconut tree from Kerala and Tamil Nadu. This investigation is collected those seeds, and crushed in the form of powder. The traditional method of Transesterification process is used and for this investigation. The bio fuels are extracted from these oils and analyzed with combination diesel with periodic blending percentages. The comparison test for Emission and CO2 have been conducted from the following bio fuels. The result were discussed and concluded the various blending combination of bio fuels.

Key words

Gulmohar seed, Citrullus seed, Coconut shell

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